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Important ornithological records from the Rio Juruá, western Amazonia, including twelve additions to the Brazilian avifauna

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The Rio Juruá is one of the largest white-water tributaries of the Amazon. Its drainage is mostly within Brazilian territory, but the basin also includes a portion of southeastern Peru. There are only two important works on the avifauna of the Juruá. Nils Gyldenstolpe’s (1945) major treatise deals with the bird specimens in the Stockholm museum collected by the Olalla brothers in 1936 (Olalla 1938) on the lower and middle sections of the river in Amazonas state, Brazil. Novaes’ two reports (1957, 1958) are on his own expedition to the upper Juruá in Acre from June to September 1956. Here we report the results of new research on previously unexplored portions of the river basin (see Oren & Albuquerque (1990)), located between the relatively well-studied areas of central Brazilian Amazonia (e.g. Cohn-Haft *et al.* 1997, Stotz & Bierregaard 1989 and Willis 1977) and Peruvian Amazonia (e.g. Parker *et al.* 1994 and Terborgh *et al.* 1990).

Here we present an annotated list of the most important ornithological records from three field expeditions undertaken in the Juruá River basin, in the states of Amazonas and Acre, Brazil. The first was [part of a larger enterprise] to determine the importance of the Juruá as a biogeographical barrier. Quantitative data from other vertebrate inventories undertaken during this expedition between July 1991 and June 1992 at 12 forest sites have uncovered many noteworthy species records of mammals, reptiles and amphibians from along the Juruá (Peres 1993, Patton *et al.* 1994, C. Peres, C. Gascon, J. Malcolm, J. Patton and M. N. F. da Silva, unpublished data). The second series of expeditions was part of a research program to study the management of forest resources by rubber tappers in Brazil’s first Extractivist

Reserve in 1994 and 1995 (Cunha in press). The third expedition was the initiation of a faunal inventory program in the Serra do Divisor National Park in April and May 1996.

We present twelve additions to the avifauna of Brazil: Black-capped Tinamou *Crypturellus atrocapillus*, Black-billed Cuckoo *Coccyzus erythrophthalmus*, Chimney Swift *Chaetura pelagica*, Scarlet-headed Barbet *Eubucco tucinkae*, White-lined Antbird *Pernostola lophotes*, Rufous-fronted Anthrush *Formicarius rufifrons*, Round-tailed Manakin *Pipra chloromeros*, Sulphur-bellied Flycatcher *Myiodynastes luteiventris*, Black-faced Cotinga *Conioptilon mcihennyi*, Yellow-green Vireo *Vireo flavoviridis*, Casqued Oropendola *Psarocolius oseryi*, and Black-and-white Seedeater *Sporophila luctuosa*. Records of *C. erythrophthalmus*, *P. lophotes*, *C. mcihennyi*, *P. oseryi*, and *S. luctuosa* are supported by voucher specimens, and *C. atrocapillus*, *Formicarius rufifrons*, and *M. luteiventris* by tape recordings. The records of *C. pelagica* and *E. tucinkae* were of reliable sight records. Additionally, specimens of Blue-headed Macaw *Ara couloni*, Emerald Toucanet *Aulacorhynchus prasinus*, Manu Antbird *Cercomacra manu*, and Scarlet Tanager *Piranga olivacea* were collected for the first time in Brazil. We also include notes on behaviour, vocalisations and taxonomic status of several poorly-known species, significant extensions of known ranges and new insight into the wintering areas for some boreal migrants.

Study sites and methods

Field records were obtained primarily from five sites along both the central and upper regions of the Rio Juruá and its tributaries (Fig. 1): 1-Barro Vermelho, Rio Juruá, Amazonas (6°28'S, 68°46'W); 2-Porongaba, Rio Juruá, Acre (8°45'S, 72°49'W); 3-Boca do Tejo, Rio Juruá, Acre (8°58'S, 72°42'W); 4-Restauração, Rio Tejo, Acre (9°02'S, 72°16'W); 5-Valparaíso, Igarapé São Luís, Acre (8°50'S, 72°54'W). Both principal regional forest types (*terra firme* and *várzea*, the latter subject to seasonal flooding) were surveyed from the first three sites on both banks of the Juruá. At Restauração and Valparaíso *terra firme* forest dominated, though *várzea* was present in limited areas. Less extensive habitats such as secondary growth, riverine edge, oxbow lakes, and bamboo were also visited and surveyed whenever possible. Further opportunistic records were made during boat travel along watercourses while moving to and from sampling localities, (Eirunepé (6°40'S, 69°52'W) in Amazonas, Cruzeiro do Sul (7°38'S, 72°36'W) in Acre, along the Rio Tejo to Restauração, and along the Igarapé São Luís). Observations from boats were made when weather permitted, from first light around 0545 h to 1100 h and 1530 h until dusk at 1800 h. When we use the terms "right bank" and "left bank," this terminology refers to the traditional Amazonian system, based on the hand each bank is on *when descending a watercourse*.

We used both auditory and visual survey methods to record the avifauna. Visual sampling was made with 10 × 40 binoculars and a 30 × telescope and tripod. AW carried out auditory surveys with a Sony TCM 5000 tape recorder, Sennheiser ME 80 directional microphone

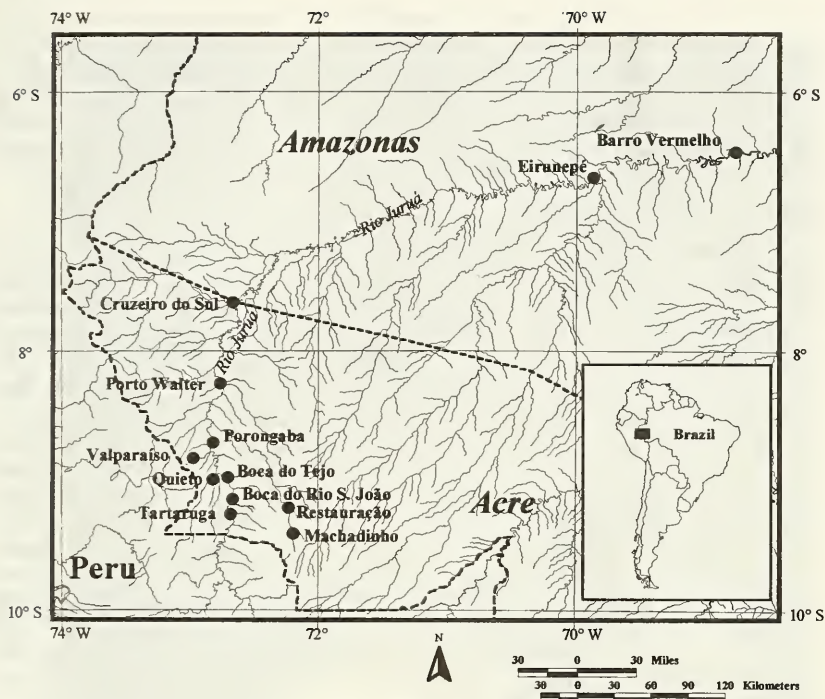


Figure 1. Map of the upper Rio Juruá, western Brazil, with the major collecting and observation localities indicated.

and playbacks at the first four sites; DCO did the same with similar equipment at Valparaíso. AW tape-recorded as site vouchers as many different species as possible, which will be archived at the British Library National Sound Archive (London). DCO's tapes were deposited at the Museu Paraense Emílio Goeldi/CNPq/MCT, (MPEG) Belém, Pará, Brazil. Special specimen collecting permits were issued by IBAMA, the Brazilian environmental authority. Understorey birds were sampled and voucher specimens collected using 2.5×12 m mist nets set from ground level to 2 m high. Mist net lines of either 16 or 30 nets were run. In addition, random nets were located in other types of vegetation such as bamboo and secondary growth. Specific canopy and midstorey species were collected using a shotgun. All specimens are deposited in the serial ornithological collections of the MPEG.

BLACK-CAPPED TINAMOU *Crypturellus atrocapillus*

A single bird tape-recorded by AW at Restauração on the upper Rio Tejo on 24 November 1994. The bird called at dusk from disturbed *terra firme* forest edge with bamboo and was heard on 4 other evenings

after this date. During fieldwork in 1995 AW heard calling birds from the following sites, 7 May: Boca do Rio São João (9°09'S, 72°40'W); 10 December; Caipora (9°17'S, 72°41'W); 26 May and 14 December: right bank of the Rio Amônia (9°00'S, 72°50'W). These represent the first Brazilian records for this species, which was previously known only from southeastern Peru north at least to Cuzco and northern Bolivia (Ridgely, pers. comm.).

ORINOCO GOOSE *Neochen jubata*

This once was presumably a common and widespread species throughout most of its wide range in Amazonian Brazil, including the Rio Juruá; however, it has become locally extinct due to hunting pressure in most areas. We found no evidence of its continued existence in all the upper Rio Juruá. However AW recorded it as local and fairly common in regions sparsely inhabited by humans along the middle Rio Juruá a day's travel downstream from Eirunepé, Amazonas. Here pairs and a few family groups were observed, some of them large. All birds encountered were very wary; head-bobbing movements were noted even at great distance and increased in frequency as the boat approached. The largest group was 18 birds, with two adults, possibly females, with 16 fully-grown young on the 13 October 1991; some birds dived under the water while others flew on closer approach. Diving of young of this species can be fatal; all five small 8–10 day old young were devoured by piranha (*Serrasalmus* sp.) near Santarém, Pará (Gil Serique *in litt.*). Other family parties observed on the same day included 8 two-and-a-half week old young with 2 adults and another pair with 4 four to six day old young.

GREY-BELLIED HAWK *Accipiter poliogaster*

A sub-adult female was collected on 18 February 1992 (MPEG 48030) on the left bank of the Juruá at Porangaba. The bird was found roosting at 2000 h about 10 m up in a tree in *terra firme* forest. This strikingly different sub-adult plumage is not described in field guides or any other literature; distinct rufous neck and ear coverts of juvenile birds were lacking, being slate grey like the rest of the upperparts, with only a small trace of rufous on edge of ear coverts (only visible in the hand); underparts white, throat white with a few dark grey-black streaks, sides of upper breast and neck with drop like grey streaks, sides of breast and flanks lightly barred with broad brown and grey bars, rest of underparts white; upperparts, mantle and wings dark slate grey with buff edgings to the wing coverts. Soft part colours: eyes orange; cere and bill greenish/yellow with the culmen more yellowish; legs yellow. Photos by AW are deposited in the VIREO (Philadelphia Academy of Natural Sciences) slide library no. W17/4/014 to W17/4/017 (Plates 3 & 4).

This little-known accipiter is rare throughout its extensive range in South America. In Colombia the species is recorded as a possible austral migrant, from early March to early June (Hilty & Brown 1986). It is reported to be migratory and absent in southern South America during the austral winter (Wattel 1973). However, an immature



Plate 3. Head of Grey-bellied Hawk *Accipiter poligaster* (Acre, Brazil), showing an undescribed plumage of this sub-adult female. Note the greatly reduced amount of rufous remaining on this sub-adult plumage, which differs markedly from the extensive rufous nuchal collar, cheeks and side of chest on the immature plumage. Note soft parts, orange irides as in adult (immature having yellow), cere and bill dull greenish yellow, and culmen yellow.



Plate 4. Ventral view of sub-adult female Grey-bellied Hawk *Accipiter poligaster* showing pure white underparts, grey-black streaking on the sides of the throat, drop-like grey streaks on the upper breast and neck, and side of breast and flanks lightly barred with broad brown and grey barring. Strikingly different from adult-plumaged birds, which have a pure grey belly, and from the distinct immature plumage which shows a striking resemblance to an adult Ornate Hawk-Eagle *Spizaetus ornatus*.

recorded in Manaus, Amazonas, Brazil on 13 January 1995 (AW and Kevin Zimmer) presumably involved an over-summering immature or a locally breeding bird. The species appears to be extremely rare in the Amazon basin with very few skins and reliable sight records. Our January and mid-February records are too early for an austral migrant. Further information on this species is required to resolve its status in Amazonia.

ZONE-TAILED HAWK *Buteo albonotatus*

An adult was recorded soaring over the Rio Juruá 5 km upriver from Cruzeiro do Sul on 12 November 1994. Later a pair was seen perched on riverside trees on the bank of the Rio Juruá about 5 km south of Porto Walter (8°15'S, 72°45'W). Our two records represent the only records from western Amazonian Brazil, although the species is found at several nearby Peruvian Amazon sites, including Tambopata (Parker *et al.* 1994).

PEREGRINE FALCON *Falco peregrinus*

Two records by AW. A large adult (probably female) some 5 km down the Rio Juruá from Eirunepé on the 11 October 1991 was perched on a dead snag at a river's edge. Again on the 13 October 1991 a probable female in the same plumage was observed some 175 km down river. These are the first records of this presumed boreal migrant in the Rio Juruá drainage.

CHESTNUT-HEADED CRAKE *Anurolimnas castaneiceps*

This rather elusive species was tape-recorded on 10 December 1995 at Tapuara on the left bank of the Rio Juruá in secondary growth adjacent to *terra firme* forest. Robert Ridgely later identified the tape-recorded vocalizations (in litt.). This is the second Brazilian record. The first was from Rondônia on the Rio Abunã on 11 November 1992 by T. A. Parker (Pacheco 1996). The species occurs in adjacent Peru and in Colombia.

PAINT-BILLED CRAKE *Neocrex erythrops*.

Two of these crakes were captured in small mammal traps on the Rio Juruá bank on 16 and 18 October 1991. Traps were set in long grass on the left bank at Barro Vermelho. Photographs of these birds are deposited in the VIREO collection, Philadelphia, USA. The range of this furtive species is incompletely known; the nearest records are from Tambopata in Peru (Parker *et al.* 1994).

LAUGHING GULL *Larus atricilla*

On 9 and 10 December 1994 an immature was observed by AW at Cruzeiro do Sul on the Rio Juruá. This represents only the second inland record for Amazonian Brazil. This species is normally a coastal migrant in South America; it is common along the coasts of Amapá and Pará during the boreal winter. The other Amazonian record for Brazil is from Manaus, Amazonas, on the Amazon in December 1987. Further inland Amazonian records are of a specimen collected by a

Louisiana State University expedition to Limoncocha in the Peruvian Amazon in December 1975, a sight record from the Ecuadorian Amazon (R. Williams, *in litt.* 1995), where a single bird was seen repeatedly from late December 1994 to January 1995 on the Rio Napo at Coca, as well as a few other recent sightings from the Rio Napo (R. Ridgely, pers.comm.).

BLUE-HEADED MACAW *Ara couloni*

This macaw, known from eastern Peru and adjacent northern Bolivia, was only recently recorded in Brazil at Brasília, Acre, in the Rio Purus drainage (Parker & Remsen 1987) and Plácido de Castro, Acre, in the Rio Madeira basin. Our new records for Brazil are one pair observed by AW at Porongaba on the Rio Juruá in February 1992; AW and DCO later found the species common in November 1994 farther up the Juruá basin on the Rio Tejo at Restauração. Our peak count here was 32, observed in small groups as they flew high over forest to a roosting area on 24 November 1994. During the same period it was uncommon along the Juruá at Boca do Tejo where the Chestnut-fronted Macaw *Ara severa* was by far the commonest macaw species. AW and DCO collected the first Brazilian specimen on 28 November 1994 at Restauração (MPEG 52019). The species was repeatedly recorded in flocks of 4–7 birds at Valparaíso in April–May 1996. Our series of records suggests that the species is reasonably common and widespread in western Acre along the upper Rio Juruá and its tributaries.

BLACK-CAPPED PARAKEET *Pyrrhura rupicola*

This species has been previously recorded only twice within Brazil, from Rio Branco, Acre (Sick 1985, Forrester 1993), where it was found to be common in 1989 (Forrester 1993). We found the species to be fairly common along the Rio Juruá at the mouth of the Rio Tejo on both banks in *terra firme*. AW tape-recorded birds but no voucher specimens were obtained. Flocks flew rapidly and noisily through the mid-storey in typical fashion for the genus, alighting to feed and then moving off noisily and abruptly. The Painted Parakeet *Pyrrhura picta roseifrons* was sympatric in the same habitat and much more common.

SCARLET-SHOULDERED PARROTLET *Touit huetii*

A group of 5–7 was found on 15 November 1994 in *várzea* forest at Boca do Tejo on the left bank of the Rio Juruá. They were located by their calls in a large leguminous tree where they were feeding on 6–8 cm fruit pods. The following morning at 0730 h they were heard arriving, calling noisily as they flew through the canopy in a tight group and alighting in the same tree. Once in the tree crown they remained very quiet, walking around within the tree on branches and climbing onto the outer branches, often using the beak as extra support. Easily overlooked because they tend to vocalise principally during their rapid flights, parrotlets of the genus *Touit* are the most poorly known group of all Amazonian psittacids.

On 3 December, 4–5 birds were still present feeding in the tree. They were tape-recorded and a single specimen was collected (MPEG 52022). These records are the first from Acre, although the species is recorded from nearby Tambopata, Peru and in Pando, northwestern Bolivia (Parker & Remsen 1987). There are few confirmed records from within Amazonian Brazil. The closest previous Brazilian record is from the Jaú National Park, Amazonas (AW pers. obs.), some 1,500 km east north-east.

BLACK-BILLED CUCKOO *Coccyzus erythrophthalmus*

One was observed by AW on 18 February 1992 at Porongaba, on the right bank of the Rio Juruá in secondary growth. The bird was in thick cover 5 m up on the edge of *terra firme* forest searching for prey, and behaving in the characteristic skulking manner of this genus. This was probably the same individual that was later collected within 150 m of the site on 28 February 1992 (MPEG 48047). This record represents the first record and specimen for Brazil and suggests that the individual was an over-wintering bird; if so this extends the species' known wintering range eastward. The Black-billed Cuckoo has been recorded wintering in northwestern Venezuela, Colombia, Ecuador and northern Peru, and as an accidental in northern Argentina and Trinidad (Meyer de Schauensee 1970). Recent accidentals have also been reported from Paraguay and from Bolivia at Cochabamba (Hilty & Brown 1986). All Ecuadorian records appear to involve transient birds (R. Ridgely, pers. comm.)

LONG-TAILED POTOO *Nyctibius aethereus longicaudatus*

Single birds were tape-recorded by AW on the nights of 20 and 21 October 1991 at Barro Vermelho, and at Porongaba on 13 January 1992. Both records were of birds in *terra firme* forest calling from the understorey and the midstorey, respectively. This nocturnal bird was little-known until its voice was learned by ornithologists in the last decade. Although many new records of the species have since come to light, it is still poorly represented in museums and certainly is more widespread in Amazonian Brazil than the few specimen records reflect. Disjunct *N. a. aethereus*, known from the Atlantic rainforests of south-eastern Brazil, is even less known and is significantly larger than the Amazonian form (M. Cohn-Haft, pers. comm.). This, combined with the geographical isolation of the two forms, suggests that the Amazonian taxon deserves full species status, as it was treated, in fact, in the past (Cory 1918).

CHIMNEY SWIFT *Chaetura pelagica*

A monospecific flock of c. 20 birds was observed by AW on 1 February 1992 at 1730 h below Porto Walter on the Rio Juruá. Birds were circling low over the river and skimming the surface to drink. The following day several km down river from Porto Walter two larger flocks of c. 50 and 200 were seen drinking. The larger flock included at least 2 Pale-rumped Swifts *Chaetura egregia*. The next day AW observed another flock of c. 70 15 km farther up river. On 6 December

1994 4 birds were seen by AW at Grajaú near Cruzeiro do Sul, as they circled 15–20 m over the river with a mixed species flock of swifts including Short-tailed Swift *Chaetura brachyura* and Fork-tailed Palm Swift *Tachornis squamata*.

Exceptionally good field conditions including perfect light, close low flying birds, repeated views and comparisons with other close *Chaetura* species allowed us confidence in our identification. AW noted the following field marks: pale, almost whitish, throat contrasting with a darker face and head; dark sooty brown upperparts with a suggestion of being slightly darker than the underparts; paler greyish rump extending onto the upper tail. Jiz: a very strong flight with powerful wing beats and no bulges shown in the secondaries that many other *Chaetura* show at times.

C. pelagica's wintering range is still poorly known, mostly due to difficulty in field identification. It apparently winters in western Amazonia (east to Manaus) and Chile (Arica); perhaps western Peru (Hilty & Brown 1986) and western Ecuador (R. Ridgely, pers. comm.). The purported first Brazilian record was from Manaus in late March when Gilliard (1944) observed what he believed was this species entering a chimney. This record seems unsatisfactory, however, and probably refers to another *Chaetura*, such as resident Chapman's Swift *C. chapmani* (AW pers. obs.) or the austral migrant Sick's Swift *C. "andrei" meridionalis* (see Marín 1997). Gilliard's record has already been noted as unsatisfactory (Stotz *et al.* 1992, Sick 1985). These new sight records are the first confirmed Brazilian records and indicate that it is a fairly common winter visitor in western Acre. This confirms Parker *et al.*'s (1992) suggestion that "a portion of the population, at least, winters in mostly western Amazonia."

WHITE-THROATED JACAMAR *Brachygalba albogularis*

This species was local and uncommon along the upper Rio Juruá in November and December 1994, with only two groups located during our census work. We first observed this jacamar along the Rio Tejo where a family party of 4 was perched in *Cecropia* trees along the river edge in secondary growth bordering *várzea* forest. The birds were perched between 7–15 m up sallying to catch insects. Their behaviour was much like the more widespread Brown Jacamar *Brachygalba lugubris*. Sallies of 2–30 m for insects were noted. The longer sallies often involved a swooping down off the perch and then flying fast on a horizontal plane and ending with a swoop up at the end to catch the insect prey. A pair was collected by AW on 19 November 1994 (MPEG 52054/55).

FULVOUS-CHINNED NUNLET *Nonnula sclateri*

The first record of this poorly known and rarely seen species was a lone bird observed by AW at Porongaba on 11 February 1992. The bird was tape-recorded while singing, perched motionless 5–6 m up in a vine tangle on the edge of a trail through disturbed *várzea* forest. The song was a series of equally spaced plaintive repetitive "weeip, weeip, weeip" up to 30 notes. The song is most similar to Rusty-breasted

Nunlet *N. rubecula*, though on average a longer series of individual notes than that species, each note being slightly longer and not emphatic. The bird was very confiding and allowed close approach. It moved its tail in 4–5 small jerks first to the right and then left as noted in other species of *Nomula* and other *Malacoptila* puffbirds (Whittaker *et al.* 1995). The bird was loosely associated with a small mixed species understory bird flock. Four birds were mist-netted and collected (MPEG 48125/26/27/34) by AW in disturbed *terra firme* understory on 29 February 1992 at Porongaba. Soft parts: brown eye with a pink eye ring, pale brown legs, and maxilla black, mandible grey, total length 145–155 mm and masses 15–17 g. Also AW observed a lone bird at close range on 24 May 1995 on the upper Rio Tejo while it sat motionless, perched 3 m up on a ridge in *terra firme* dominated by bamboo. The close resemblance to *N. rubecula* is striking in the field; however, the best distinguishing features are as follows: rufous brown lores (white in *N. rubecula*), grey wash to cheeks, darker breast, and buffy wash to the lower belly. The fulvous chin is not a good field mark and is only noticeable under ideal close views (AW pers. obs.). Previously recorded from the Rio Juruá by Gyldenstolpe (1945), it is also known from Brazil from the Rio Purus (Todd 1943).

SCARLET-HEADED BARBET *Eubucco tucinkae*

AW observed a single male of this striking barbet on 22 November 1994, feeding in the top of a fruiting fig (*Ficus* sp.) along the left bank of the Rio Tejo, in the canopy of the *várzea* forest at the river edge. Parker *et al.* (1991) note that this species prefers floodplain forest within 150 m of the river. AW observed another adult male on 5 May 1995 at close range while feeding in a flowering *Inga* tree, apparently taking nectar at the flower bases, at Boca do São João on the upper Rio Juruá. DCO recorded two other individuals in *várzea* forest along the Igarapé São Luís in May 1996. These sight records constitute the first Brazilian records of an uncommon and little-known barbet, previously considered a Peruvian endemic (Parker *et al.* 1982). In 1990 this species was recorded from northwestern Bolivia (Parker *et al.* 1991) at Alto Madidi.

EMERALD TOUCANET *Aulacorhynchus prasinus*

One individual was observed at Porongaba on 27 February 1992 in *terra firme* forest as it flew into the canopy of a fruiting tree. During November 1994 several pairs were observed along the Rio Juruá and the Rio Tejo, where the species was relatively common. A specimen was collected on 4 December 1994 (MPEG 52064). This is the first Brazilian specimen and pertains to the distinctive black-throated subspecies *dimidiatus*. The first Brazilian record was a sight record at Plácido de Castro, Acre in 1989 (Forrester 1993). The subspecies is also known from adjacent lowlands of Amazonian Peru from Tambopata and Manu (Terborgh *et al.* 1984), and at Balta, La Pampa, Astillero, Marcapata, Collpa, and Hacienda Villa Carmen (O'Neill & Gardner 1974).

RUFIOUS-HEADED WOODPECKER *Celeus spectabilis*

First located at Tartaruga (9°16'S, 72°16'S, 72°41'W) on the left bank of the Rio Juruá on 9 May 1995 in *terra firme* forest with large bamboo, where a calling male was tape-recorded and observed at close range after responding to tape playback. The bird pecked and drummed on the bamboo trunks from 8–12 m up. The plumage description fitted *C. s. exsul*, which is known from adjacent Peru. The following day, 4 km farther down the same trail, AW located a pair in bamboo understorey as they were pecking on dead bamboo trunks. The male was tape-recorded drumming on a hollow dead bamboo stump. The foraging birds preferred the almost horizontal bamboo stems from 3–10 m high. This same area of bamboo also had *Cercomacra manu*, *Abazenops dorsalis*, *Simoxenops ucayalae*, *Drymophila devillei*, and Ornate Antwren *Myrmotherula ornata*, all well known bamboo specialists, as well as Semi-collared Puffbird *Malacoptila semicincta*, found only within bamboo in this region, suggesting that this species also has affinity to bamboo at least in this region.

AW later recorded *C. spectabilis* from the Rio Tejo at Machadinho (9°25'S, 72°12'W) on 18 May 1995 in dying bamboo where one bird was heard tapping loudly on bamboo stems and briefly seen. Another two pairs were seen at Santo Antonio (9°11'S, 72°13'W) on 24 May 1995, again in bamboo. Farther down the Rio Juruá on the Rio Amônia at Quieto (9°00'S, 72°49'W), one male was seen twice on 26 May 1995 in secondary growth at 2–4 m boring holes in a live *Cecropia* trunk. We conclude that *C. spectabilis* is fairly common in Acre and mostly associated with bamboo.

The first Brazilian record of *C. spectabilis* is in fact a specimen attributed to this species collected in 1926 by E. Kaempfer from the state of Piauí, eastern Brazil. The specimen is an adult female collected on 16 August 1926 at Uruçuí on the Rio Parnaíba (7°14'S, 44°33'W), at an altitude of 124 m, original number 3707. The specimen is deposited in the American Museum of Natural History (New York City) as no. 242687, where it remained labelled as a *Celeus* sp. until its unusual plumage features were noted by Charles O'Brien. He informed L. L. Short that he thought that the specimen most closely resembled *C. spectabilis*, but did not publish. After O'Brien retired, Short continued to investigate this puzzling *Celeus*, eventually describing it as a new sub-species; *C. spectabilis obrieni* (Short 1973).

Celeus spectabilis obrieni differs strikingly from both *C. s. spectabilis* and *C. s. exsul*, not only in its plumage differences but also in its smaller size (wing, tail, bill and tarsus). Plumage differences described by Short (1973) are: "Greatly reduced barring dorsally (strongest and most prominent in nominate, also well marked on entire mantle in *exsul*). Very reduced ventral markings (very heavily marked in nominate form, however significantly less in *exsul*), even less in *obrieni*. Whiter above and below; small outer rectrices mainly cinnamon (black in nominate and *exsul*); and secondaries paler, more buffy (less chestnut), especially on tertial feathers; the bill appears yellower (compared to both newer and older specimens)."

C. s. obrieni has not been seen in the wild since the holotype was collected. Recent ornithological work in Piauí in the region of Uruçuí close to the type locality at the Estação Ecológica de Uruçuí-una (8°37'S, 44°55'W) by F. C. Novaes during December 1980 (Novaes 1992) was unsuccessful in relocating the taxon. The specimen of *C. s. obrieni* is anomalous for the following reasons: 1-*C. s. obrieni* represents a range extension of about 3,150 km east of the species' known range. The other two subspecies of *C. spectabilis* are found from eastern Ecuador, southwards just east of the Andes to Cochabamba, Bolivia (Meyer de Schauensee 1966) and, now, southwestern Brazilian Amazonia. 2-The area in northern Brazil where the holotype was collected is extremely arid. There the typical dominant habitat is dry cerrado intermixed with caatinga, a typically arid scrub with stunted, often thorny trees with many cacti and other succulents (Novaes 1992). Novaes noted smaller areas of low riverine scrub forest and swamp vegetation dominated by *Mauritia flexuosa*. Semi-deciduous forest may also occur along some water courses of the region.

Importantly, the type locality is found in the caatinga endemic centre of Northeastern Brazil (Cracraft 1985), with its many endemic species and subspecies. Even though many bamboo species with ranges in the western Amazon basin in Brazil, Peru, Ecuador and Bolivia have been recently recorded thousands of km farther east in the Brazilian Amazon at sites such as Alta Floresta, Mato Grosso and Carajás, Pará (Zimmer *et al.* 1997, Ridgely & Tudor 1994), none has been recorded east of the important zoogeographic barrier of the Rio Tocantins.

The significantly different morphological data, distinct plumage differences, disjunct range and completely different habitat requirements in different climatic zones convince us that *obrieni* should be considered a full species, distinct from *C. spectabilis*. We suggest the name of "Caatinga Woodpecker" for the separated taxon.

PERUVIAN RECURVEBILL *Simoxenops ucayalae*

This rare furnariid is a bamboo specialist and was encountered for the first time in Acre. Our records suggest that the species in the upper Juruá is a local and uncommon resident in *terra firme* forest with either scattered or large stands of bamboo. Records were from Boca do Tejo where an adult and juvenile were mist-netted and collected (MPEG 52095/96), and at Restauração on the upper Rio Tejo where one male and two females were collected (MPEG 52097/98/99). There are only three previous records from Brazil, mostly from skins in the MPEG collection. A specimen (MPEG 32018) reported by Novaes (1978a) is from an unknown site somewhere in either Amazonas or Pará. The second (MPEG 38156) is from the Serra de Carajás, Pará. Recently it has been recorded through sightings at Alta Floresta, Mato Grosso, where it is locally uncommon in bamboo in *terra firme* forest (Zimmer *et al.* 1997). It is also found in nearby south-eastern Peru at Tambopata (Parker *et al.* 1994) and at Manu National Park (Terborgh *et al.* 1984).

Another 2 pairs were observed by AW on 9 May 1995 at Tartaruga. One bird was observed foraging in bamboo at 3.5 m where it was

pecking hard at the dead stem of a bamboo making a woodpecker-like loud tapping noise. After opening up the hole the bird put its beak in, pulled out fibres, then held its eye up close to the hole and peered in, looking first upwards and then down for prey items. Apparently unsuccessful, it then flew off out of sight.

DUSKY-CHEEKED FOLIAGE-GLANER *Abazenops dorsalis*

A pair was seen and tape-recorded in thick bamboo in the understory of *terra firme* forest at Tartaruga on 9 May 1995 by AW. The pair was observed as they foraged along with a mixed-species understory flock. The following day along the same trail another pair was located in the bamboo understory. These sightings represent only the third record for this species in Brazil. It was first recorded from Alta Floresta, Mato Grosso (Zimmer *et al.* 1997) where it was fairly common. The second record was a pair tape-recorded and observed at close range after playback at Guajará Mirim, Rondônia in April 1995 (AW pers. obs.).

GREY-THROATED LEAFTOSSER *Sclerurus albicularis*

We recorded this leaf Tosser only once in Acre at Tartaruga on 9 May 1995 in the understory of *terra firme* forest, where AW tape-recorded the vocalisation and then observed a single individual after playback. This is the fourth Brazilian record and represents a range extension of approximately 1,000 km to the west in Brazil. Stotz *et al.* (1997) reported the first Brazilian record of a Grey-throated Leaf Tosser from Cachoeira Nazaré, Rondônia (9°44'S, 61°53'W), collected on 7 November 1986. Two others were collected some 150 km to the south, south-west of Cachoeira Nazaré almost simultaneously by Museu Goeldi technicians in *terra firme* forest at km 87, BR-429, Linha 64, Alvorado do Oeste, Rondônia (11°25'S, 62°25'W): MPEG 38745, male, 34 g, testes 2 × 3 mm, total length 180 mm, 21 November 1986; and MPEG 38746, male, 36 g, testes 5 × 3 mm, total length 180 mm, 18 November 1986.

BAMBOO ANTSHRIKE *Cymbilaimus sanctaemariae*

This bamboo specialist was recorded from two different locations along the Rio Juruá by AW at Arara (9°00'S, 72°45'W), and at Quieto on the Rio Amônia. Pairs were observed and tape-recorded always in bamboo-dominated understory of *terra firme* forest as they followed mixed species understory flocks. In response to playback a male raised its black crest feathers up almost vertically. Previously known from Brazil from eastern Acre in the Purus basin and Rondônia (Parker *et al.* 1997).

BLACK BUSHBIRD *Neotantes niger*

A pair was mist-netted in thick heliconia-dominated *várzea* forest understory at Barro Vermelho on the right bank of the Rio Juruá in the state of Amazonas in 15 October 1991. The pair was photographed and released; the photographs are deposited in VIREO W17/4/031-032. Another female was mist-netted and collected (MPEG 48203) at Sobral, left bank of the Rio Juruá on 19 March 1992, also in *várzea*

forest understorey. A further pair was collected at Boca do Tejo on 17 and 18 November 1994 (MPEG 52121-22). The area was poorly drained with a substantial amount of standing water with small palms and vine tangles covering small shrubs and trees. The male responded to playback of its song by approaching very warily, skulking and perching often in the thickest vine tangles where he worked his way up, hitching through the tangle and always remaining very well hidden. While perched he held his body rather upright, like some obligate army ant followers such as *Gymnopithys* and *Pithys*, with tail held c. 20–30° below the body plane. Agitated by playback, the male flared out his normally concealed white interscapular patch and also showed a little white edging to its shoulder. Interestingly, other suitable habitat surveyed by playback of the species' song in several areas along the upper Rio Juruá and Rio Tejo was unsuccessful.

STRIATED ANTbird *Drymophila devillei*

This bamboo specialist was found entirely in that habitat and was much more common along the upper reaches of the Rio Juruá than in the middle course. AW recorded one bird on 16 December 1991 from *várzea* forest on the right bank of the Rio Juruá at Barro Vermelho in sparse bamboo. Voucher specimens and several tape recordings of birds were made along the upper Rio Juruá, Rio Tejo and Rio Amônia. This represents a range extension to the west in Brazil (see Parker *et al.* 1997), though it is common in nearby Tambopata, eastern Peru.

MANU ANTbird *Cercomacra manu*

A lone male bird was located by its croaking voice by AW as it foraged in a bamboo thicket in *terra firme* at Porongaba on 17 February 1992. During several minutes of observation the male was noted foraging within the bamboo from between 3–5 m, gleaning insects off both upper and lower leaf surfaces. AW collected the male on 22 February 1992 (MPEG 48238). It was also found at Tartaruga on the left bank of the Rio Juruá in bamboo-dominated *terra firme* understorey where AW found 4 pairs and tape-recorded several of them on 10 and 11 December. Another male was observed carrying a green 2 cm katydid to a possible nest or young. Along the Rio Amônia at Quietto, while searching bamboo along a 5 km trail, AW heard a further 3 pairs on 14 December 1995, again in bamboo-dominated *terra firme*, but this time higher upland forest rich in rubber trees. This recently described species (Fitzpatrick & Willard 1990) from southeastern Peru is a well known bamboo specialist (Kratter 1997). This is the first Brazilian specimen and the second country record. The species was first reported in Brazil (Zimmer *et al.* 1997) at Alta Floresta, Mato Grosso.

WHITE-LINED ANTbird *Pernostola lophotes*

A pair and a lone singing male were observed and tape-recorded by AW and DCO on 15 November 1994 in disturbed *várzea* forest at Boca do Tejo. One male was collected from the site on 20 November (MPEG 52153) by AW, who later collected another male from the same locality (preserved at MPEG as an anatomical specimen). Another individual

male was tape-recorded by AW from a dense stand of bamboo 5 km up river of Restauração on the upper Rio Tejo on 28 November 1994. AW tape-recorded two additional singing males from the upper Rio Tejo at Machadinho on 24 May 1995 in dense bamboo and secondary growth on a forest boarder. These records represent the first for Brazil. The known range of *P. lophotes* now extends from southeastern Peru and adjacent Bolivia east into western Acre, Brazil.

GOELDI'S ANTBIRD *Myrmeciza goeldii*

Although heard more often than seen, the species was found to be locally uncommon in the upper Rio Juruá. It was known before only from extreme upper Rio Purus drainage in Brazil (Ridgely & Tudor 1994). AW tape-recorded several pairs and collected one male on 28 November 1994 (MPEG 52155). We found *M. goeldii* to inhabit both *várzea* and transitional forest, often associated with bamboo or thick secondary growth close to waterways. On two occasions AW observed birds attending army ant swarms with other antbird species. AW observed an adult male carrying nesting material at Caipora on 11 December 1995. R. Ridgely (in litt.) found two nests in southeastern Peru in August 1996. The nests were cup-shaped and well-hidden on or near the ground in dense vegetation overhanging trails and each contained two eggs.

RUFOUS-FRONTED ANTTHRUSH *Formicarius rufifrons*

This rare formicariid was described in 1957 from southeastern Peru. For a long time it was only known from the Type, a female collected in 1954 on the Rio Colorado (Blake 1957). The species was rediscovered in September 1982 along the Rio Manu (Parker 1983). The species is listed as "threatened" in Collar *et al.* (1992).

AW heard an individual singing from a thickly overgrown orchard just after dawn on 11 December 1995 at the small settlement of Caipora on the right bank of the Juruá. He tape-recorded the bird and later observed it at very close range for an extended period. The bird walked on the ground with the characteristic rail-like gait of all *Formicarius* antthrushes, its tail cocked up. The orchard contained citrus and guava trees, and had many thick vines. The area was set back on the river floodplain some 75 m from the bank. Nearby in transitional forest and secondary growth, a Black-faced Antthrush *Formicarius analis* was heard singing. *F. rufifrons* scraped the ground with its feet in leaf litter while foraging. During song bouts the bird stopped walking and stood still while holding its head up at a 30° angle and vibrating its tail as it emitted the notes. A single Amazonian Antpitta (*Hylopezus berlepschi*; common in the area) was the only other terrestrial antbird sharing the bird's territory; it sang most of the morning from the same site.

This represents the first record for Brazil. It has recently been recorded in Bolivia (*vide* Sjoerd Maijor) and was tape-recorded by Lois Jammes (in litt.) on 10 September 1996 in *várzea* near the Rio Tahuamanu, Pando. These recent range extensions are encouraging for the species' conservation status.

ELUSIVE ANTPIITTA *Grallaria eludens*

AW tape-recorded an Elusive Antpitta on 9 and 10 May at Tartaruga in thick upland *terra firme* forest undergrowth. Although repeated attempts were made to see the bird (5 hours of observation) it was never seen. The bird sang from dense bamboo-dominated understorey where there were several overgrown tree falls along a stream. The recordings were compared with a recording of *G. eludens* taken by T. Meyer at Abujao, Ucayali, Peru, and one of the Ochre-striped Antpitta *G. dignissima* by R. Behrstock at La Selva Lodge, Napo, Ecuador (Fig. 2). The voices are very similar, but *G. eludens* has a longer introductory note and the second note begins with an abrupt rise.

This record represents the second for Brazil. The first was at Benjamin Constant, Amazonas, Brazil (Willis 1987). This record was later doubted and rejected due to voice similarities and geographic considerations and proposed to refer to *G. digissima* (Sick 1997). The record should be accepted, however, since *G. eludens* was observed and tape-recorded in the Benjamin Constant area in 1997 by Mario Cohn-Haft (pers. com.) and AW in upland *terra firme* forest.

CHESTNUT-BELTED GNATEATER *Conopophaga aurita*

Our two records are of females, the first seen by AW at Barro Vermelho on 15 October 1991 in *terra firme* understorey. The second female was mist-netted at Porongaba (MPEG 49695) on 15 February 1992 in *várzea* forest understorey on the left bank of the Juruá. The exact contact zone of this species and Ash-throated Gnateaters *Conopophaga peruviana* along the Rio Juruá is not known. AW observed and tape-recorded a pair of Ash-throated Gnateaters on the upper Rio Juruá on 12 December 1995 at Largo Ceará (9°14'S, 72°43'W) and two immature males were collected at Seringal Oriente in 1956 (Novaes 1957).

WHITE-BROWED PURPLETUFT *Iodopleura isabellae*

AW saw this small cotinga once on the Rio Bajé in May 1995, in a group of three, which were tape-recorded. DCO observed another trio in high forest at the edge of a clearing at Valparaíso in May 1996. These are the first records in the Rio Juruá basin for this species, which is apparently rare and local in the region.

BLACK-FACED COTINGA *Conioptilon mcilhennyi*

This monotypic genus of cotinga, described from southeastern Peru (Lowery & O'Neill 1966) was first recorded by AW on 24 November 1994 at Restauração, upper Rio Tejo, when two birds were tape-recorded by AW in the canopy of *terra firme* forest on the right bank of the Rio Tejo. The voice sounds initially like the warming-up call of the Screaming Piha *Lipaugus vociferans* which then continues into sounds similar to the first notes of the call of the Smooth-billed Ani *Crotophaga ani*. AW collected a male at same locality on 27 November (MPEG 52215, 91 g). It was reasonably common along both banks of the Tejo and also at Boca do Tejo, right bank of the Rio Juruá. At Valparaíso on the Igarapé São Luís the species was relatively

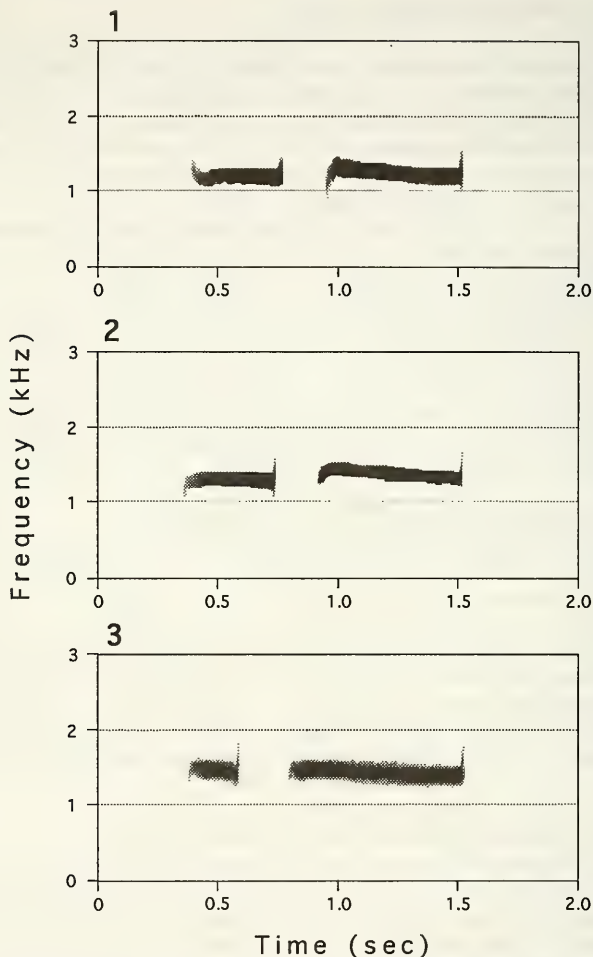


Figure 2. Sonograms of *Grallaria eludens* and *G. dignissima*. 1=*G. eludens*, Tartaruga, Rio Juruá, Acre, Brazil, A. Whittaker recordist. 2=*G. eludens*, Abujao, Ucayali, Peru, T. Meyer recordist. 3=*G. dignissima*, La Selva Lodge, Napo, Ecuador, R. Behrstock recordist.

common along the stream and in *terra firme* forest at the edge of clearings. Two individuals were collected on 6 May 1996: MPEG 52585, male, 89 g, gonads 4.7×2.5 mm; MPEG 53586, female, 81 g, ovary granulated, oviduct 3.1 mm, largest ovule 2.1 mm. The gonad measurements and behaviour recorded suggest that May marks the end of the reproductive period for this species in the Juruá basin.

These represent the first records for Brazil of a species thought to be a Peruvian endemic (though Ridgely & Tudor (1994) suggested that

it was likely to occur in adjacent western Brazil and northwestern Bolivia).

Although Ridgely & Tudor (1994) indicate that this is a species of floodplain forest in Peru, we recorded it also well away from the rivers' floodplains, once 4 km away in upland *terra firme* forest.

PURPLE-THROATED FRUITCROW *Querula purpurata*

This species was seen and tape-recorded at Barro Vermelho during October 1991 and was seen or heard daily in *terra firme* forest. On the upper stretches of the Rio Juruá it was uncommon. A single voucher specimen was collected (MPEG 52217, female) at the mouth of the Rio Tejo on 3 December 1994. These are the first records for the Rio Juruá basin (Snow 1982).

BARE-NECKED FRUITCROW *Gymnoderus foetidus*

This species was common around Barro Vermelho in the expansive *várzea* forest and uncommon along the whole of the upper Rio Juruá. Birds were most often observed flying high over the river or feeding at fruiting trees, especially in *Cecropia* trees feeding on the catkins, often along with other frugivores. There are no other previous reports for this species from the upper Juruá drainage (Snow 1982).

ROUND-TAILED MANAKIN *Pipra chloromeros*

An active lek of 3–4 males was observed and tape-recorded by AW on 10 December 1995 in *terra firme* forest understorey at Tapuara (9°16'S, 72°42'W), on the left bank of the Rio Juruá. They displayed actively, and sang and chased one another 10–15 m up in the lower midstorey. Brief observations of the birds showed them holding the bright scarlet hind crown feathers out horizontally, exposing the olive-yellow base of the nape feathers. The 3–4 adult males also made short dance displays, fanning out their rounded tails and revealing their yellow thighs.

On 12 December 1995 in *terra firme* understorey at Largo Ceará on the left bank of the Rio Juruá, AW recorded another active lek and tape-recorded them. This lek contained at least three adult male birds. These are the first Brazilian records for the species, which is known from nearby eastern Peru.

STRIPED MANAKIN *Machaeropterus regulus*

This species was common and sympatric with Fiery-capped Manakin *Machaeropterus pyrocephalus* at Barro Vermelho. Here, several individuals of both species were captured, often in the same mist net in disturbed *terra firme* forest edge. Unlike *M. pyrocephalus*, *M. regulus* was not closely associated with bamboo in the understorey. Smaller numbers of *M. regulus* were found further up the Rio Juruá near the headwaters in *terra firme*. DCO collected both species at Valparaíso on the Igarapé São Luís in May 1996. AW observed lekking males calling from horizontal perches in the understorey from 2.5–6 m. Males often changed singing perches, which were often within ear shot of 2–3 other lekking males. The call is a soft but quick two note insect-like "whoo-cheet," which can be very easy to overlook and its ventriloquial

quality makes it very hard to locate singing birds. The voice of the nominate race of *M. regulus*, endemic to Atlantic rainforest of southeastern Brazil (Bahia south to Rio de Janeiro), is strikingly different. The song from lekking males is a shorter, very fast metallic buzzing which is repeated more quickly than *M. r. striolatus* of Amazonia. The vocal differences between these two forms, combined with their wide geographical separation, the slightly larger size of the nominate birds, as well as significant plumage differences, strongly suggest that the Amazonian populations represent a separate species.

SULPHUR-BELLIED TYRANT-MANAKIN *Neopelma sulphureiventer*

This poorly known species was recorded by AW from disturbed *várzea* forest on 11 December 1995 at Caipora, on the right bank of the Rio Juruá. The birds were in the edge of an overgrown orchard bordering transitional forest, in an area of sandy soil situated about 100 m from the bank of the Rio Juruá. A lone male was observed and tape-recorded as he called motionless from 2 separate perches (1.5 m and 3.5 m up) some 6 m apart in fairly open, disturbed understorey. After playback the bird raised its crown feathers and exposed its spectacular (normally concealed) sulphur yellow crown. The singing bird had a pale iris washed with buff rust colour. Another adult, observed within 50 m of the singing bird, was observed feeding a dark-eyed bird with distinctly paler head, presumably a juvenile. The scarce data on the behaviour of this bird are summarised by Remsen *et al.* (1988).

LONG-CRESTED PYGMY-TYRANT *Lophotriccus eulophotes*

This poorly-known bamboo specialist was tape-recorded and seen by AW at Porongaba on 14 February 1992 in an area of bamboo in *terra firme*. This bird was very difficult to observe, feeding from 4–8 m up in thick cover. Later, a male was mist-netted and collected (MPEG 48400). On 17 November 1994 AW tape-recorded a minimum of 4 singing birds holding territory along a 300 m path through extensive bamboo in *terra firme* forest near Boca do Tejo. Birds were observed perched at 8–15 m, often motionless for long periods, before flying up to undersides of leaves and sally-gleaning insects. Interestingly, *L. eulophotes* is the only Amazonian bamboo specialist noted to be rare (Parker *et al.* 1982, Pierpont & Fitzpatrick 1983). However, it was common at Quieto on the Rio Amônia along a 5 km rubber tapper's trail through upland forest with extensive bamboo (c. 20 pairs were recorded). Here it actually outnumbered the usually more numerous Flammulated Bamboo-Tyrant *Hermitriccus flammulatus*. While searching for the possible occurrence of White-cheeked Tody-tyrant *Poecilatriccus albifacies* (without success), AW noted that *L. eulophotes* often responded to the latter species' call. *Lophotriccus eulophotes* was previously recorded in Brazil only from the left bank of the Rio Purus at Huitanaã, in the state of Amazonas (Ridgely & Tudor 1994).

ALDER FLYCATCHER *Empidonax alnorum*

A single bird was observed by AW at Boca do Tejo on the left bank of the Rio Juruá on 20 November 1995. It foraged 5–10 m up in secondary growth of transitional várzea forest and vocalised “fee-bee-o.” This boreal migrant has only been recorded twice in Brazil. The first record is a specimen collected at Santarém on the lower Rio Tapajós on 24 February 1978 (Sick 1985). The species was also seen in Manaus on 15 December 1984 (Stotz *et al.* 1992). These authors state that it is common in secondary growth in lowlands of eastern Peru and suggest that it is probably regular through most of western Amazonia. Recently, Mario Con-Haft recorded it as fairly common and collected a specimen at Benjamin Constant, Amazonas, April 1997 (pers. comm.).

DUSKY-TAILED FLATBILL *Ramphotricon fuscicauda*

Two singing birds were tape-recorded on 26 May 1995 at Alegria (8°57'S, 72°25'W) on the Rio Tejo within transitional forest. The understorey contained only small amounts of bamboo. The birds, c. 50 m apart, were observed 2–7 m up singing in vine tangles in the dense understorey. Later the same day at Quietão on the Rio Amônia AW located at least 6 singing birds, 5 along a 500 m trail in *terra firme* forest with thick bamboo understorey.

This is only the third locality for this species in Brazil, it being known previously only from Alta Floresta, Mato Grosso (Zimmer *et al.* 1997), and Carajás, Pará (DCO pers. obs.).

THREE-STRIPED FLYCATCHER *Canopias trivirgata*

AW first recorded this species in várzea forest at Cachoeira do Rio Bajé (8°55'S, 72°22'W) on 14 May 1995, where birds were heard and their characteristic flock rallying calls were tape-recorded. AW and DCO observed another pair on the left bank of the Rio Juruá at Tapuara on 10 December 1995, in the edge of secondary forest with a small mixed species flock of birds. These two records represent a range extension east from the nearest known locality at Tambopata, Peru (Parker *et al.* 1994). It was also recorded at the mouth of the Rio Juruá in Brazil where observed and tape-recorded by AW (pers. obs.) in March 1993. The few records from south of the Amazon for both this and the next species probably underestimate their ranges, especially in Brazil. They, as many other canopy species, tend to be overlooked by even experienced observers if their vocalisations are unfamiliar (Whittaker 1998).

YELLOW-THROATED FLYCATCHER *Canopias parva*

AW tape-recorded birds at Paraíso Dois (9°14'S, 72°15'W) on 20 May 1995 in a mixed species canopy flock in *terra firme* forest. This record represents a 1,200 km range extension in Brazil from the Urucu (Peres & Whittaker 1991). Peru has only two records, both from northern Loreto.

SULPHUR-BELLIED FLYCATCHER *Myiodynastes luteiventris*

A single bird tape-recorded by AW on 7 February 1992 at Porongaba, on the right bank of the Juruá, was the first Brazilian

record (Ridgely and Tudor 1994). During the 1994 survey a lone bird was seen on 22 November by AW along the Rio Tejo, perched 8 m up on a dead tree on the river bank sallying after insects. Closer observations confirmed that the bird was feeding, along with 4 Eastern Kingbirds *Tyrannus tyrannus*, on a hatch of either winged ants or termites.

EASTERN KINGBIRD *Tyrannus tyrannus*

We found this species to be very common in February 1992, with the largest count 200+ on 1 February 1992 (AW and C. Peres). This involved birds coming in to roost 10 km down river from Porto Walter, in thick secondary growth bordered by pasture on the river bank of the Juruá. The large concentration of birds attracted a Bat Falcon *Falco rufigularis* which hunted them. AW and CP observed several other flocks during February 1992. Other significant numbers were 50+ birds at a roost on 23 February, 30 km upstream from Cruzeiro do Sul. During November 1994 AW and DCO recorded peak counts of 150+ and 120 along the Rio Tejo. Stotz *et al.* (1992) report that the species is common on wintering grounds in the lowlands of eastern Peru and northern and eastern Bolivia. Brazil has few published records and, surprisingly, still no specimen record. These observations confirm that the species is a common winter visitor to western Brazil in western Acre.

BLUE-AND-WHITE SWALLOW *Notiochelidon cyanoleuca*

Both records involved birds foraging for insects low over the Rio Juruá. AW first observed an adult on 12 November 1994 near Moura upriver from Cruzeiro do Sul and later a dull immature at Rio Caipora on 7 May 1995. Both birds were associated with small mixed swallow feeding flocks flying low over the water, including both boreal migrant Sand Martins *Riparia riparia* and Barn Swallows *Hirundo rustica*, as well as resident White-winged Swallow *Tachycineta albiventer*. Few records of this species are known from Amazonia (Oren & Parker 1997).

CLIFF SWALLOW *Petrochelidon pyrrhonota*

Our only record was a party of 6 birds observed by AW along the Rio Juruá half way between Itamarati and Eirunepé, Amazonas on 14 October 1991. Birds were associating with a mixed feeding flock of swallows, including both *Hirundo rustica* and *Riparia riparia*, as they flew low over the river surface. This record most certainly refers to transient birds on the way to wintering grounds of *P. pyrrhonota* further south in southern Brazil, Paraguay and Argentina. There are few Amazonian records for this species, with the nearest two Brazilian records both from near Manaus, Amazonas; a pair in October and the second a returning spring pair in April (Stotz *et al.* 1992), although there are numerous records from eastern Peru and eastern Ecuador (R. Ridgely, pers. comm.).

YELLOW-GREEN VIREO *Vireo flavoviridis*

Two to three birds were watched closely by AW as they foraged in secondary growth on the forest border on 9 December 1995 at São João. They foraged silently in typical vireo manner from 3–11 m up. The following day 1–2 birds were again observed along the same forest edge. AW observed a further 4 birds in secondary growth bordering *terra firme* forest at Quieto on 14 December 1995. These reports represent the first records for the country and suggest at certain times of the year that the species is fairly common in western Amazonian Brazil. In view of *V. flavoviridis*'s similarity to the resident Red-eyed Vireo *Vireo olivaceus chivi*, it may have been overlooked. Ridgely & Tudor (1989) suggest the winter range probably also extends to western Amazonian Brazil, but that it was as yet unrecorded.

MASKED YELLOWTHROAT *Geothlypis aequinoctialis*

The only record of this widespread species was on the bank of the Juruá near Barro Vermelho, where AW observed a female on 21 October 1991. The closest record to the east is from Rio Branco, Acre (Forrester 1993), 560 km away. AW collected a female in September 1992 very close to the mouth of the Rio Juruá on a river island in the Rio Solimões at Caítaú-uará, 03°29'S, 66°04'W (MPEG 51790). Recent records from Mamirauá (Pacheco 1995) indicate that the species is more widespread in western Amazonia than once thought (Ridgely & Tudor 1994).

SCARLET TANAGER *Piranga olivacea*

AW observed a single adult male in full nuptial plumage on 1 February 1992, along the right bank of the Juruá some 20 km below Porto Walter. The bird was foraging in the upper midstorey of *várzea* forest along the river bank. AW further recorded 2 birds in female plumage along the Rio Tejo below Restauração on 23 November 1994. A single male in mostly its female-like winter plumage was repeatedly seen in a fruiting tree at Restauração from 25 November onwards. This male was collected by AW on 1 December 1994 (MPEG 52253) and represents the first Brazilian specimen. There are only two previous Brazilian sight records, both from the outskirts of Manaus, Amazonas (Stotz *et al.* 1992). The wintering range of this species in Amazonian lowlands is unclear (Isler & Isler 1987). Stotz *et al.* (1992) suggest that the Scarlet Tanager reaches its greatest wintering abundance in adjacent south-eastern Peru, although it is also common throughout the boreal winter in eastern Ecuador (R. Ridgely, in litt.). These records suggest that it is a regular winter visitor to western Acre and irregularly ventures farther east as far as Manaus, central Amazonian Brazil.

BLACK-AND-WHITE TANAGER *Conothraupis speculigera*

DCO recorded this species singing in second growth at Valparaíso throughout the study period in April and May 1996. A sub-adult male, with mostly mature plumage but a few greenish juvenal feathers on the mantle and breast, was collected on 6 May: MPEG 52679, 24.2 g, gonads 2.9×1.4 mm. This is the second Brazilian specimen. The

species was only recently confirmed for Brazil by Stotz (1990), based on a female collected on the Juruá in August 1956 and deposited in the Museu de Zoologia da Universidade de São Paulo, Brazil. This species apparently breeds in eastern Ecuador and northwestern Peru in Feb–May, then departs to western Amazonia. This record and other recent ones support this migratory pattern consistently (R. Ridgely, in litt.).

RED-BILLED PIED TANAGER *Lamprospiza melanoleuca*

A flock of three birds was heard and tape-recorded by AW on 28 October 1991 at Barro Vermelha, Amazonas from *terra firme* forest. Later, three birds were observed by AW feeding on the fruits of a single large *Cecropia* tree. A small group was tape-recorded by AW on 4 December 1994 at the Boca do Tejo, left bank of the Juruá. *L. melanoleuca*'s known distribution in western Amazonia excludes the Brazilian portion (Isler & Isler 1987) and Ridgely & Tudor (1989:337) state "it has not yet been recorded south of the Amazon in western Amazonia [in Brazil] but probably occurs". Records from the Urucu, Amazonas (Peres & Whittaker 1991) and our records from both near Eirunepé and along the Rio Tejo confirm that it does occur in this region. However, it seems to be uncommon to rare in most of southwestern Amazonian Brazil.

BAND-TAILED OROPENDOLA *Ocyalus latirostris*

This poorly known species with a restricted range was encountered repeatedly by AW in *terra firme* forest along the Juruá. The birds were usually in mixed-species flocks with other icterids, but were twice encountered in monospecific flocks of 3 and 8 birds. The mixed species flocks varied from 20 to 150 birds, with the largest number of *O. latirostris* being c. 50. The Russet-backed Oropendola (*Psarocolius angustifrons*) was the most common associate with *O. latirostris*, followed by Yellow-rumped Cacique (*Cacicus cela*), and only one record with Velvet-fronted Grackles (*Lamprospiza tanagers*). Band-tailed Oropendolas were mostly in mid-storey and subcanopy *várzea* forest, and less commonly in *terra firme* forest.

On 16 September 1994 AW located an active nest in a live *Cecropia* tree near the mouth of the Rio Tejo. The nesting tree was approx. 20 m tall in a natural clearing beside a small stream in transitional *terra firme* forest approx. 1.5 km from the river. The same tree contained an active colony of 14 Casqued Oropendola nests. The *O. latirostris* nest was the highest in the tree (17 m up), approximately 1 m from the end of a branch sloping at 60°. The nest was sack-shaped with a top entrance, constructed of woven fibres and possibly grass stems. There were two Casqued Oropendola nests within 3 m. The adult *O. latirostris* arrived silently to feed the young, which chirped excitedly at the arrival of the parents. The only other published information on nesting in this species is by Koepcke (1972).

CASQUED OROPENDOLA *Psarocolius oseryi*

Two were observed by AW at Barro Vermelho, Amazonas, on the left bank of the Rio Juruá on 22 October 1991. The birds were in *terra*

firme forest where they were seen flying into a *Coussopia* tree with ripe fruit and many other frugivorous bird species. The oropendolas were observed for several minutes as they fed on the fruits before they flew off. Later an active nesting colony was located by AW near the mouth of the Rio Tejo on 16 September 1994. The colony was in *terra firme* forest and had 14 nests under construction in a *Cecropia* tree. Birds were tape-recorded and a single female collected (MPEG 52244). Several other foraging flocks were observed by AW and DCO along the Rio Tejo around Restauração. On 23 November 1994 AW watched a female feeding a recently fledged young which had not yet got a full tail. DCO observed a single bird flying in *várzea* forest near the mouth of the Igarapé São Luís on 13 May 1996.

This species occurs from eastern Ecuador and eastern Peru (Loreto south to Puno), and Ridgely & Tudor (1989) suggest that it should also occur in adjacent western Brazil. These records are the first for Brazil and represent a range extension of some 750 km east into Amazonas and Acre, Brazil.

SLATE-COLOURED SEEDEATER *Sporophila schistacea*

AW tape-recorded several singing males in disturbed *várzea* forest on 30 January 1992 on the outskirts of Cruzeiro do Sul, Acre. All birds seen were in immature male plumage, like the female but with small but obvious white wing speculums. Three singing birds were located next to a forest clearing with tall bamboo clumps. Birds were singing from 7–15 m high and often difficult to locate. These records represent a range extension of about 500 km NNE from the nearest records from Huánuco and Madre de Dios, eastern Peru (Ridgely & Tudor 1989). These are the first records in western Amazonian Brazil. The only other published Amazonian records are from eastern Amazonia in Pará and Amapá (Snethlage 1914, Novaes 1978b). AW also observed and tape-recorded males from Rondônia, both an adult male from Ariquemes in January 1995 and 3 adult males near Guajará Mirim in April 1995. With increasing deforestation encouraging the spread of bamboo, this species may extend its range progressively through the rest of Amazonia.

BLACK-AND-WHITE SEEDEATER *Sporophila luctuosa*

On 21 January 1992 a mixed flock of 20–25 seedeaters was observed on the margins of the Rio Juruá, c. 20 km up river from Cruzeiro do Sul by AW and CP. The flock contained both *S. luctuosa* and Lesson's Seedeater *S. bouvronides*. We estimated that a little less than half this mixed flock was *S. luctuosa*, with over 50% in adult male plumage. The flock was feeding on the ripe seed heads of grasses and sedges that were abundant along the river bank. During the next few days travelling up the Juruá we noted the following additional observations: one pair on the morning of 2 February 1992; later in the afternoon another male observed singing; on 11–12 February 1992 AW found and tape-recorded a small flock around a little settlement a few km upriver from Porongaba, in an extensive area of pasture with seeding grass and low bushes adjacent to the river; on 11 February at least two male birds and

one bird in female plumage mixed in with a small flock of Chestnut-bellied Seed eaters *S. castaneiventris*. The following day there were at least eight males mostly not in full adult male plumage with mottled areas of brown visible in their black plumage and one bird in female plumage. Three males were collected during these two days (MPEG 48471–73).

Another male was observed at Largo Ceará by AW on 10 December 1995 along the banks of the Rio Juruá. It was associating with a feeding flock of 3–4 female *Sporophilas*, probably Double-collared Seed eaters *S. caerulescens*.

These records are the first for Brazil. The species' range is western Venezuela, Colombia, Ecuador, Peru and northern Bolivia, "mostly between 1,200–2,500 m, occasionally lower (to 1–300 m); perhaps engages in seasonal altitudinal movements" (Ridgely & Tudor 1989). Our records reinforce the hypothesis of altitudinal and geographical migration.

Recent unpublished reports from lowland areas in adjacent Peru at Tambopata and Madre de Dios record the species as a seasonal migrant from Aug–Nov, some years being more common than others (Barry Walker, pers. comm.).

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